

**TESTIMONY OF STEPHEN GUERTIN, DEPUTY DIRECTOR FOR POLICY,  
U.S. FISH AND WILDLIFE SERVICE, U.S. DEPARTMENT OF THE INTERIOR,  
BEFORE THE U.S. HOUSE OF REPRESENTATIVES, COMMITTEE ON NATURAL  
RESOURCES, SUBCOMMITTEE ON OVERSIGHT AND INVESTIGATIONS  
REGARDING “THE STATUS OF THE FEDERAL GOVERNMENT'S MANAGEMENT  
OF WOLVES”**

**September 21, 2016**

Chairman Gohmert, Ranking Member Dingell, and Members of the Subcommittee, thank you for the opportunity to appear before you today to testify on the U.S. Fish and Wildlife Service’s (Service) work to recover wolves across the lower 48 United States. My name is Stephen Guertin and I am the Deputy Director for Policy for the Service.

The wolf is an iconic yet controversial example of the Endangered Species Act’s (ESA) success in preventing extinction and promoting recovery. Because of years of sustained and cooperative efforts of Federal and State agencies, Tribes, and non-governmental entities, wolves have made an impressive recovery in the western Great Lakes (WGL) and the northern Rocky Mountains (NRM). They are reestablished in large landscapes where only decades ago they had been effectively exterminated, and have recently expanded their range into the Pacific Northwest and northern California. In the Southwest and Southeast, however, wolves exist in the wild only as reintroduced experimental populations and continue to be highly endangered. These starkly different circumstances reflect both the successes and the challenges associated with restoring a charismatic large predator to the landscape. Our goal, consistent with our legal mandates, is to recover wolves—so that they are no longer threatened or endangered—and return management of those recovered wolves to the States.

**Background on Wolves and ESA Protection**

The ESA is one of the nation’s most important conservation laws. It is implemented jointly by the Service and the National Marine Fisheries Service. The law’s stated purpose is to provide a program and means for the conservation of threatened and endangered species and the ecosystems upon which they depend. The ESA provides a safety net for species that are at risk of going extinct. The Service uses the best available scientific and commercial information to determine whether species need to be listed, to identify and address the threats to the species, and to facilitate the recovery of the species. When a species is designated as threatened or endangered – or “listed” under the ESA – it is in dire need of help.

Throughout their range, wolves are keystone predators and have a profound effect on the ecosystems they inhabit. The wide range of habitats in which wolves can thrive reflects their adaptability as a species. In his essay titled, “Thinking Like a Mountain,” the great American conservationist Aldo Leopold described the cascading effects of losing wolves in a forested mountain ecosystem - the resulting increase of deer, followed by overgrazing, deforestation and erosion, and then the collapse of deer after having eaten themselves out of house and home.

Wolves were once found across the northern hemisphere of the planet, including most of North America. When Europeans began to colonize America in the 1600s, wolves were widely distributed and could be found in each of what are now the lower 48 states. As human populations across America grew so did fears of wolves and other predators and the perceived risks they posed to personal safety, livestock, pets, and game species. Extensive predator control programs, magnified by the use of bounties, and combined with habitat degradation and a declining prey base, resulted in the extirpation of wolves from most of the lower 48 states early in the 20th century, with the exception of only a few hundred remaining wolves in northern Minnesota and Isle Royale in Michigan. No wolves persisted in vast wild areas such as the NRM and the desert southwest.

Wolves were among the first species added to the list of endangered species, starting with the red wolf (*Canis rufus*) and subspecies of the gray wolf (*Canis lupus*) in 1967 and 1973 under precursors to the ESA – the Endangered Species Preservation Act of 1966 and the Endangered Species Act of 1969. Both red wolves and gray wolves were listed as separate species under the modern ESA in 1974 and the Mexican gray wolf subspecies was listed as endangered in 1976. By 1978, all gray wolves were listed as an endangered population at the species level throughout the contiguous United States and Mexico, except for those wolves in Minnesota, which were classified as threatened.

In 1988, Congressman John Dingell, a sponsor of the original ESA, wrote the following about the passage of the law in 1973. “The goal Congress set then was unparalleled in all of history. Our country resolved to put an end to the decades – indeed, centuries – of neglect that had resulted in the extinction of the passenger pigeon and the Carolina parakeet, and the near extinction of the bison and many other species with which we share this great land. If it were possible to avoid causing the extinction of another species, we resolved to do exactly that... When Congress passed the Endangered Species Act, it set a clear public policy that we would not be indifferent to the destruction of nature’s bounty.”

The ESA has been successful in its essential goal to conserve listed species, which effectively protects the nation’s biological diversity heritage for the benefit of future generations of Americans. Since it was enacted by Congress in 1973, the ESA has successfully prevented the extinction of more than 99 percent of the over 1,500 species it protects. Recovering species to the point where they are ready for delisting and no longer need the protections of the ESA often requires focused conservation efforts over many years, often decades, to implement recovery actions. In the last 8 years, 19 species have been delisted due to recovery and returned to the State management. Recently delisted species include the Louisiana black bear, Oregon chub, Delmarva fox squirrel, Virginia northern flying squirrel, Modoc sucker, island night lizard, and brown pelican.

The ESA has been successful for wolves. Extinction in the lower 48 states was averted and the long, sustained work of recovery—along with state, local, tribal, and other Federal partners—has produced thrilling successes. The ESA provides the Service with management flexibilities that have proven vital in furthering the recovery of wolves, including the designation of nonessential experimental populations under section 10(j) of the law. With a nonessential experimental population, the Service is able to introduce a population with flexible management options

available that are tailored to the needs and concerns of particular area of introduction as well as the species' needs. Probably the best-known wolf recovery effort was the reintroduction of gray wolves into Yellowstone National Park in 1995. Some studies indicate that in relatively pristine areas such as Yellowstone, the establishment of healthy wolf packs has had a positive cascading effect on the ecosystem. These effects to relatively pristine areas, which may still be unfolding and are being studied, appear to include keeping elk from overgrazing along exposed river banks where they are vulnerable to wolf predation, leading to regrowth of riparian vegetation, an increase in beaver colonies, and the resulting positive habitat changes that beaver dams provide to a host of wildlife species. While these effects may occur at varying degrees elsewhere, they are increasingly modified and subtle the more an area is affected by humans.

As with our conservation work for any listed species, recovery of wolves is not something the Service can or has achieved alone. Throughout the wolf recovery process, the Service has worked in close partnership with Federal and state agencies, Tribes, private landowners, and other stakeholders. Wolf recovery in the WGL and the NRM has been an amazing success due to both the resiliency of wolves and the cooperative efforts of the Service's many and varied partners.

Bolstered by reintroductions and the conservation and management as species protected by the ESA, wolves have repopulated portions of their historical range in the lower 48 states. Restoration throughout the species' entire historical range in the U.S. is not required for recovery under the ESA, nor is it a reasonable expectation for species such as wolves given the expansion of human populations and resultant habitat degradation. In the NRM and WGL the success of recovery efforts has been remarkable. These animals are resilient and their range is naturally expanding. The success in these areas led the Service to determine that gray wolves are biologically recovered under the requirements of the ESA, with the exception of Mexican gray wolves, which remain endangered. We have proposed and finalized a number of rules to reflect our science-based determination of recovery under the ESA; courts have overturned some of those delisting rules, as judicial review remains an important part of the ESA. The red wolf remains a separately listed entity.

## **Status of Wolves in the Lower 48 United States**

### ***Gray Wolves***

Gray wolf recovery efforts have long focused on three recovery areas - the NRM, the eastern United States, and the Southwest. Recovery plans were developed in each of these areas to establish and prioritize recovery criteria and actions appropriate to the unique local circumstances of the gray wolf.

### ***Wolves in the Northern Rocky Mountains***

At the time of listing, wolves in the NRM region were completely extirpated. In 1982, a wolf pack from Canada began to occupy Glacier National Park along the U.S. – Canada border and a few years later, the first litter of pups documented in over 50 years was born in the Park. This

natural recolonization was the beginning of wolf recovery in the NRM. Under the protections of the ESA, wolf populations in the NRM have rebounded thanks to natural dispersion and successful reintroduction efforts in Yellowstone National Park and central Idaho. Since delisting, under State management, the wolf population in this region continues to hold steady. As of December 31, 2015, there were at least 1,704 wolves in 282 packs in Montana, Idaho and Wyoming. An additional 200 wolves in 34 packs were estimated in Oregon and Washington.

By the mid 2000's, wolves in the NRM had met the Service's recovery goals under the ESA, prompting the Service to delist the gray wolf distinct population segment in this region in 2008 due to recovery. Following that initial delisting, NRM wolves have had a litigious history, with several court challenges filed against the Service's decisions. Ultimately, the Congress directed the Service to reinstate our delisting rule and shielded it from further legal challenge. Today, wolves in Idaho, Montana, eastern Oregon, eastern Washington, and north-central Utah are no longer listed under the ESA and are being successfully managed by the states. Both Idaho and Montana manage wolves in accordance with state management plans, under which their wolf populations have remained secure and well above recovery objectives. Similarly, the Service's delisting of wolves in the State of Wyoming in 2012 drew a legal challenge. That delisting was vacated by a court decision in 2014 and the Service currently manages wolves in Wyoming as a nonessential experimental population under the ESA in accordance with that ruling. The federal government has appealed this ruling, and oral arguments in this appeal are scheduled for this Friday, September 23, 2016.

#### *Wolves in the Western Great Lakes*

Unlike the NRM region, wolves were never completely extirpated from the WGL region; it is estimated that the Minnesota wolf population was comprised of a few hundred individuals at the time of listing. Under the protections of the ESA, this population naturally expanded its range into Wisconsin and Michigan. The current population of wolves in the WGL region is derived from expansion of this remnant population in northeastern Minnesota, supplemented by possible contributions from wolves from southern Ontario. Like the wolves in the NRM region, WGL wolves have exceeded the recovery goals that the Service set, with more than 3,600 wolves estimated in Minnesota, Michigan, and Wisconsin. The Service first delisted these wolves in 2007, though today they remain listed under the ESA due to ongoing litigation through which a court vacated our final delisting rule in 2014. The federal government is appealing the court's decision to reinstate ESA-protections for WGL wolves; oral arguments in this appeal are scheduled for mid-October.

#### *Mexican Gray Wolves*

The Mexican gray wolf is the rarest subspecies of gray wolf in North America. Once common throughout portions of the southwestern United States, the Mexican wolf was all but eliminated from the wild by the 1970s due to extensive predator control initiatives. Recovery efforts for the Mexican wolf began when the subspecies was listed as endangered in 1976.

Following the capture of some of the last remaining Mexican wolves in the wild in Mexico, the Service and Mexico collaborated to establish a binational breeding program with seven founding

wolves. Today, the approximately 50 captive breeding facilities in the two countries house 240 to 300 Mexican wolves, which are managed under the Mexican Wolf Species Survival Plan. Wolves from the captive breeding program are used for reintroduction in the United States and Mexico. The Service established a nonessential experimental population of the Mexican gray wolf in Arizona and New Mexico in 1998, and the first Mexican wolves were released to the wild in the Blue Range Wolf Recovery Area within the Mexican Wolf Experimental Population Area (MWEPA) in 1998.

In January 2015, the Service published the Revision to Regulations for the Nonessential Experimental Population of the Mexican Wolf (80 FR 2512-2567, January 16, 2015). This 2015 rule under section 10(j) of the ESA provides an expansion of the area where Mexican wolves may occur and where Mexican wolves can initially be released from captivity compared to the previous 1998 10(j) rule. The 2015 rule also provides a population objective of 300 to 325 wolves in the MWEPA.

Also in January 2015, the Service also issued a final rule listing the Mexican wolf as an endangered subspecies. It is now a separately listed entity under the ESA, whereas it had previously been protected under the more generic listing for the gray wolf (*Canis lupus*) species in the lower 48 states and Mexico.

The experimental population of Mexican wolves peaked at 110 wolves in the wild in 2014, but declined to 97 wolves in 2015, principally due to reduced pup survival in 2015 relative to 2014. Since 1998, more than half of the documented Mexican wolf deaths are due to illegal killing. The release of Mexican wolves from the more genetically diverse captive population remains critical to improving the genetic health of the experimental population and moving the Mexican wolf toward recovery.

The Service reinitiated the process to revise the 1982 Mexican Gray Wolf Recovery Plan in December 2015. The Service is working with participants from the New Mexico Department of Game and Fish, Arizona Game and Fish Department, Utah Division of Wildlife Resources, Colorado Parks and Wildlife, federal agencies in Mexico, and independent scientists from the U.S. and Mexico to assist us in gathering and assessing scientific information pertinent to our development of a revised recovery plan. The revised recovery plan will provide measurable and objective criteria which, when met, will enable us to remove the Mexican wolf from the list of endangered species and turn its management over to the states. The Service expects to publish a final recovery plan by the end of November 2017.

#### *Gray Wolves Across the Remainder of the Lower 48 States*

For nearly four decades, the Service has consistently taken a regional approach to gray wolf recovery in the lower 48 states and Mexico. In other words, we have considered recovery to entail establishment of secure, healthy and stable populations of gray wolves in the WGL, the NRM, and the Southwest. We have achieved that goal for gray wolves in the WGL and the NRM, and today we continue to stand by our 2009, 2011, and 2012 final delisting rules.

Under state management gray wolves have expanded their range and now are becoming reestablished in western Oregon and Washington, and are also beginning to move into northern California. Because the 1978 listing encompassed gray wolves in the lower 48 states and Mexico, those wolves in western Washington, western Oregon, and northern California, i.e., outside of the delisted NRM distinct population segment, remain fully protected under the ESA as an endangered species. Accordingly, in June 2013, the Service issued a proposed rule to delist the gray wolf throughout the remaining conterminous United States, exclusive of the now separately listed Mexican gray wolf in the Southwest. That proposed rule was dependent upon the gray wolf populations in the NRM and the WGL being recovered and off the list. However, as noted above, our delisting decisions for gray wolves in Wyoming and the WGL were challenged and vacated. Our ability to move forward with the 2013 proposal is dependent upon the federal government prevailing on appeal of those cases. It remains our science-based view today that the gray wolf is recovered in the lower 48 states, outside of the Southwest, and we should be focusing our recovery efforts on the endangered Mexican gray wolves.

### ***Red Wolves***

The red wolf is one of the world's most endangered wolf species. Once common throughout the eastern and south central United States, red wolf populations were decimated by the early part of the 20th Century and reduced to coastal areas of Texas and Louisiana.

When the red wolf was designated as an endangered species in 1967, the Service initiated efforts to conserve and recover the species. The Service began to locate and capture as many red wolves as possible for the purposes of establishing a program to breed the species in captivity and one day reintroduce the red wolf into a portion of its former range. From this effort, 14 red wolves became the founding members of the captive-breeding program and the ancestors of all red wolves existing today. Within a few years twelve of these red wolves were successfully reproducing in captivity, allowing the Service to consider reintroducing the species in the wild as a non-essential experimental population (NEP). In 1987, the Service released four male-female pairs of red wolves to establish an experimental, non-essential population at Alligator River National Wildlife Refuge in the Albemarle-Pamlico Peninsula of North Carolina. A NEP of red wolves also was established at Great Smoky Mountains National Park in 1991, but the Service ended that project in 1998 due the lack of adequate food sources for the wolves. Today, approximately 45 red wolves roam their native habitats in a five-county NEP area in northeastern North Carolina, and nearly 200 red wolves, including 29 breeding pairs, are maintained in over 40 captive breeding facilities throughout the United States.

In 2013, the Service and North Carolina Wildlife Resources Commission entered into broad agreement acknowledging growing concerns from private landowners regarding management of red wolves and coyotes. Both agencies recognized steps were needed to improve management of the non-essential, experimental red wolf population, which included the need to conduct an evaluation of the Red Wolf Recovery Program and the implementation of its recovery actions in five counties in northeastern North Carolina.

On September 12, 2016, the Service announced significant changes for red wolf recovery after a two-year, two-step review of the entire Red Wolf Recovery Program, including the evaluation of

the captive population and the non-essential, experimental population in North Carolina. The review began in 2014 with an independent, peer-reviewed program assessment by the Wildlife Management Institute and was expanded in June 2015 to include the recommendations of a red wolf recovery team that examined feasibility of recovery in the wild, population viability, red wolf taxonomy, the historical range, and human dimensions.

Science and solid professional management decisions are driving future actions. We are pursuing recovery. One of the most significant findings of the Service's review was that the captive population is not secure. With no changes to current management, the red wolf species will likely be lost within the next decade. More animals are needed in captivity to secure the species' survival and to support any wild population, including the current NEP in North Carolina.

The red wolf is a conservation-reliant species that requires intensive management. As such, the Service will implement a series of actions to secure the captive and wild red wolf populations. To secure the captive population, the Service will work with its partners to increase capacity and reach the biological goal of at least of 400 animals with 52 breeding pairs. Additionally, all red wolves will be managed as a single meta-population with occasional movement of animals between captivity and the wild. The Service also will be proposing to reduce the scope of the NEP to federal lands within Dare County only. Focusing efforts to federal lands is necessary to re-establish management control over the wild population by removing isolated wolf packs from lands where the Service lacks access, incorporating these animals into the captive population as appropriate, and managing the remaining animals in accessible areas to minimize and manage risks of hybridization. This will result, in the near term, in a smaller non-essential, experimental population in terms of population size, the number of packs/breeding pairs, and the area occupied, and a larger, more secure and genetically robust population in captivity to provide a solid foundation for recovery of the species.

Recovery efforts involving reintroduction of large carnivores are inherently controversial, especially to local communities. The fact that red wolf conservation inevitably means reintroducing a large carnivore onto a landscape dominated by private lands (90 percent of the Southeast) makes red wolf conservation uniquely challenging. Without private landowner support, the Service will not be able to recover the red wolf.

The future path for red wolf recovery announced last week reaffirms our commitment to work closely with landowners as we recover the species. The Service will continue its efforts to remove red wolves from private lands when requested to do so by the landowner. We also will continue to seek written agreements with willing landowners to facilitate management of the wild wolves. The Service also recognizes that fundamental changes are needed in the way private landowners and other stakeholders engage in management of wild red wolves. As such, we are working with the North Carolina Wildlife Resources Commission on a substantial human dimensions project that will be completed in 2017. This work is crucial to a better understanding and greater clarity about the different opinions and attitudes of our citizens.

The complexity and scale of proposed changes for red wolf recovery will require more resources than what the Service and its partners have available. Therefore, the Service will continue to seek the support and input of private landowners as well as state partners, conservation groups and

others when implementing the actions that will safeguard the species and eventually achieve recovery of the red wolf.

### **Leveraging Partnerships to Further Recovery**

Across the Service's work on threatened and endangered species, we are actively engaged with conservation partners and the public in the search for improved and innovative ways to conserve and recover imperiled species. This is particularly true in our efforts to recover wolves. The Service works closely with our state, local, tribal, and private partners to achieve the recovery of gray wolves in the lower 48 states and the reestablishment of Mexican and red wolves.

#### ***Tribal Partners***

Since the NRM wolf program's inception in the 1980s, the Blackfoot Tribe has been a strong supporter of and collaborator with the Service, furthering the return of this culturally important iconic animal to tribal lands. The tribe came to the discussion table in the early development of the recovery goals, and consistently supported those goals through several legal challenges. With financial and technical support from the Service, a tribal biologist worked closely with the Service on the ground, coordinating trapping and monitoring efforts with the Montana Department of Fish Wildlife and Parks and Wyoming Game and Fish Department and facilitating access to tribal lands for control actions associated with livestock depredation actions. This collaboration allowed the incorporation of Blackfoot culture and traditions into the management of wolves on the reservation and supported tribal autonomy within the bounds provided by the ESA. The strong, positive working relationship between the Service and the Blackfoot Tribe has helped the NRM wolf recovery program to succeed in Montana.

The White Mountain Apache Tribe (WMAT) has been an active partner in Mexican wolf recovery for almost 15 years. The Service provides annual funding for the tribe's Mexican wolf management and monitoring program, in accordance with a Service-approved management plan. The Tribe's support has been extremely beneficial to the Service due to the geographic location of their tribal land within our experimental population area. In addition, they have demonstrated tremendous leadership communicating the benefits and impacts of tribal wolf management to other tribes in the region.

The Service hosts a Mexican wolf Tribal Working Group to provide opportunities to discuss wolf-related issues that may interest or impact the almost three dozen tribes in the Southwest. The Tribal Working Group contributed substantially to the revision of the Mexican Wolf Experimental Population rule and associated Environmental Impact Statement and is currently engaged in the development of the revised recovery plan. Through this partnership, the working group is able to advocate for the cultural, social, logistical, economic, and biological significance of Mexican wolves to the tribes. The ongoing work of the Mexican wolf Tribal Working Group is a particularly strong example of the Service's focus on developing and maintaining relationships with the tribes.

#### ***State Partners***

State fish and wildlife agencies are essential partners in implementing the ESA to protect our most at-risk species across the country. The State of Wisconsin first protected the gray wolf in 1957, seventeen years prior to the wolf's listing under the ESA. After the wolf was listed as federally endangered, wolves began returning, dispersing from Minnesota. The Wisconsin Departments of Natural Resources (DNR) started monitoring wolves in 1979 by radio-collaring and tracking wolves, surveying for winter tracks, and conducting summer howling surveys. State biologists such as those in Wisconsin are essential to monitoring efforts, as the Service typically does not have the personnel available to adequately collect monitoring data, trap and collar animals, and conduct other on-the-ground management activities. Despite limited personnel, the Service provides financial resources and technical expertise to equip states and local communities to engage in wolf monitoring and recovery.

State agencies such as the Wisconsin DNR play an important role in fostering public awareness and social tolerance for wolves. State agencies are often embedded in the local communities and their partnership enhances the Service's public outreach, improves citizen understanding of wolves, and increases involvement in wolf management. One outstanding example is Wisconsin DNR biologist Adrian Wydeven, who received the Service's annual Recovery Champion reward in 2013 for his efforts to recover wolves in the state. Of particular note were Mr. Wydeven's efforts engaging with multiple stakeholders, interest groups, and members of the public to create an environment in which Wisconsin's wolf population was allowed to grow.

Section 6 of the ESA directs the Service to cooperate with states to the maximum extent practicable to achieve recovery, and authorizes the Service to enter into cooperative management agreements with states. The California Department of Fish and Wildlife (CDFW) currently has a Section 6 agreement with the Service that provides CDFW the authority to manage for the conservation of endangered or threatened species within the state, including wolves. If the Service is able to move forward with its 2013 proposed rule, the management of the gray wolf in California will be returned to the state. In anticipation of this possibility, the CDFW is initiating development of a State wolf conservation and management framework in advance of an implementable management plan. This framework, through the state's Section 6 agreement with the Service, will allow CDFW to lead several aspects of wolf management, including investigating reports of situations involving wolves, monitoring wolf activity through capture and radio-collaring, and coordinating with other State and local entities.

The Service works closely with the Arizona Game and Fish Department in the management of the Mexican wolf. This collaboration is conducted under the framework of a memorandum of understanding with the state and other Federal and state agencies, counties, and tribes. Arizona Game and Fish Department is a key partner in the day-to-day management of Mexican wolves in Arizona, providing education, and the development of relationships with local communities, landowners and livestock permittees. The Service provides annual funding to Arizona Game and Fish Department for assistance in managing Mexican wolves in Arizona.

### ***Ranchers and Livestock Producers***

Reintroduction of a top predator such as the wolf is highly complex and often controversial; the Service recognizes that there can be real economic consequences to livestock producers who

coexist with wolves. The Service has long held that social acceptance of wolves by landowners, particularly ranchers, in wolf country is an essential ingredient for wolf recovery. To encourage social acceptance, the Service has aggressively managed wolves that consistently prey on livestock and supports compensation to ranchers for documented livestock losses through programs such as the Federal Wolf-Livestock Demonstration Project, USDA's Livestock Indemnity Program, and the Mexican Wolf/Livestock Council.

In an effort to incorporate divergent views on the Mexican wolf reintroduction, the Service appointed an eleven member Mexican Wolf/Livestock Council in 2011, a volunteer group composed of livestock producers, tribes, environmental groups, and county representatives. The Council developed a strategic plan to address Mexican wolf-livestock conflicts. The Strategic Plan is comprised of three core strategies: payments for wolf presence, funding for conflict avoidance measures, and funding for depredation compensation.

From 2011 to 2015, a total of \$594,000 has been granted from the Wolf-Livestock Demonstration Project to Arizona Game and Fish Department and the New Mexico Department of Agriculture, which in turn provide the funding for allocation by the Mexican Wolf/Livestock Council. This funding is administered by the National Fish and Wildlife Foundation through memoranda of agreement with the states, and is disbursed at the direction of the Council. These Federal grants are matched with non-federal funding provided by Defenders of Wildlife and Mexican Wolf Fund, which provide funding directly to livestock producers for implementation of proactive conflict avoidance measures (for example, range riders, fencing and flagging). Another \$70,000 was granted from the Wolf-livestock Demonstration Program to the White Mountain Apache Tribe for proactive measures.

Under the Council's Strategic Plan, the Payments for Presence Program has provided some financial compensation to offset the additional management costs associated with the presence of wolves. This program recognizes the economic impact of coexisting with wolves, including undetected depredations, and changes in livestock behavior that can result in a reduction of weight gain and reproductive rates, and increased management costs. In 2014 and 2015, the Council approved payments to twenty-eight and thirty-five, respectively, qualifying Arizona and New Mexico livestock operators totaling \$85,500 to help defray the costs of managing livestock on a landscape with wolves.

The Strategic Plan also provides funds to support the implementation of wolf-livestock proactive conflict avoidance measures by livestock producers through Defenders of Wildlife and the Mexican Wolf Fund. Both organizations are members of the Mexican Wolf/Livestock Council and fund voluntary adaptive management techniques to reduce wolf-livestock conflicts. Tools and techniques such as increased human presence, timed calving, range riders, turbo fladry (temporary electric fencing with flagging), and use of alternate pastures are just a few of the approaches that have been used successfully to keep both livestock and wolves safe.

The third strategy implemented through the Coexistence Plan is to provide compensation for livestock death or injury, including working dogs and livestock other than sheep and cattle. The Council has been providing compensation for confirmed or probable livestock depredations by Mexican wolves since September 2010. This is done in partnership with USDA's Wildlife

Services, which investigates and confirms wolf kills before a rancher can receive compensation. The Council and the Service recognize that depredation compensation does not fully address the costs experienced by ranchers due to wolf presence. As a result, wildlife managers have placed greater emphasis on conflict avoidance in recent years to help the Mexican wolf population grow alongside profitable livestock operations.

These programs implemented through the Council have helped address the economic concerns of livestock producers that have experienced wolf depredations on their livestock. While the Council is not able to fully compensate ranchers for the costs of coexisting with wolves, through the Strategic Plan, they are able to create incentives for livestock producers to promote viable ranching operations, self-sustaining Mexican wolf populations, and healthy western landscapes.

## **Conclusion**

In 1973, Congress provided the nation with a strong tool to conserve and recover our most imperiled species and the ecosystems upon which they depend – the ESA. Since they were first listed in 1974, gray wolves in the WGL and NRM have rebounded from near extirpation, thanks to strong protections that guard against extinction and to the flexibility that the ESA affords the Service as managers. These flexibilities have allowed the Service to cultivate strong, lasting, and productive partnerships with a wide range of stakeholders; partnerships that have proven integral in the biological recovery of gray wolves. But it was a complex and difficult path, complicated by the passion that the public brings to all matters relating to wolf conservation, on all sides of the issue. There are some who think recovery is not yet achieved for these wolf populations, or that question the commitment of the States to manage wolves sustainably. As a result, our delisting decisions for wolves in Wyoming and the WGL were challenged, and the final outcome is now in the hands of the courts.

In contrast, the Mexican gray wolf and the red wolf remain highly endangered. They were effectively extirpated from the wild and have been reintroduced into portions of their former range that now abound with threats – illegal shooting, conflicts with livestock production, sea level rise, genetic swamping by coyotes, low social tolerance, and many other challenges. No one said the job would be easy, and the Service is committed to continue the hard work of recovering the Mexican gray wolf and the red wolf in partnership with affected landowners, State and Federal agencies, Tribes, the Government of Mexico, academia, the conservation community, and others so that Mexican and red wolves can continue to be part of the remarkable natural biodiversity of the United States.

Challenges as well as opportunities remain for wolf recovery in the lower 48, and it will take continued collaboration between the Service and our partners to finish the work to bring these species and populations off of the federal list of threatened and endangered species and return management to the States. To reduce the time until that day comes, wildlife managers, government agencies, and the public must absorb the wisdom of Leopold and “think like a mountain” when it comes to wolves.